

DATA DICTIONARY

DATA PROCESSES

Process Name **1.0 Storage of student database**

Description All the student database from the whole college

Inbound Data Flow

- Name of the student
- Email of the student
- SID of the student

Outbound Data Flow

- Super Table

Process Name **2.0 Registration and Authentication**

Description Registration of the user by verification of identity and authentication level of the student

Inbound Data Flow

- Login/Sign-up attempt
- User detail verification
 - User detail status
 - Access level of user
- User Detail authentication
 - Login/Sign-up status
 - Access level request

Outbound Data Flow

Process Name **3.0 Custom Folder**

Description Folder to add personal documents and other important college documents, all organised at one place for easy access

Inbound Data Flow

- Request to view documents
- Request to upload documents

Outbound Data Flow

- Show documents

Process Name **4.0 Custom Reminder**

Description Set custom reminders for upcoming events/quizzes/homework deadline to schedule the week and stay ahead of time

Inbound Data Flow

- Request to set custom reminder

Outbound Data Flow

- Notification for that custom reminder

Process Name	5.0 Timetable
Description	Make your semester timetable according to all your courses to keep track of all your classes
Inbound Data Flow	<ul style="list-style-type: none"> • Request to set timetable
Outbound Data Flow	<ul style="list-style-type: none"> • View timetable

Process Name	6.0 Notifications
Description	Get notifications for club/society activities or meeting via your club/society secretaries and for quizzes and evaluations via your class representatives
Inbound Data Flow	<ul style="list-style-type: none"> • Get list for students in the club/society • Send meeting announcement • Request to view notifications
Outbound Data Flow	<ul style="list-style-type: none"> • Set exam date and assignment deadlines • Request list of students • Send/view notification alert

Process Name	7.0 Pec Social
Description	Find other students and view their profile to increase socializing
Inbound Data Flow	<ul style="list-style-type: none"> • Request to view profile
Outbound Data Flow	<ul style="list-style-type: none"> • Show profile

Process Name	8.0 Study Material
Description	Get all your course books/handouts/youtube or course links at one place via your class representative
Inbound Data Flow	<ul style="list-style-type: none"> • Request to view study material • Request to add content
Outbound Data Flow	<ul style="list-style-type: none"> • View study material

Process Name	9.0 Attendance
Description	Keep track of your attendance by marking your classes
Inbound Data Flow	<ul style="list-style-type: none"> • Get list of subjects • Set subject wise attendance • Get attendance • View attendance
Outbound Data Flow	<ul style="list-style-type: none"> • Show attendance • Request for subjects of user

Process Name

Description

Inbound Data Flow

Outbound Data Flow

10.0 View Profile

To access and view your own profile data

- Get user details
- Request to view user profile
- Request user details
- Show user profile

DATA DICTIONARY

- PecPocket

DATA FLOW

- | | | |
|----------|-----------------------|--|
| 1 | Data Flow Name | Name, Email and SID of all students |
| | Description | Admin stores the name, email and SID of all students in college in the database for authentication |
| | From Process | - |
| | To Process | 1.0 Storage of student database |
| | Data Structures | Super |
|
 | | |
| 2 | Data Flow Name | Login Attempt |
| | Description | Student/CR/Secreatary/Joint Secreatary makes a login attempt |
| | From Process | |
| | To Process | 2.1 Login |
| | Data Structures | SignUp, Auth |
|
 | | |
| 3 | Data Flow Name | Login Status |
| | Description | The login credentials are sent to the database to verify |
| | From Process | 2.1 Login |
| | To Process | - |
| | Data Structures | SignUp, Auth |
|
 | | |
| 4 | Data Flow Name | Access level check |
| | Description | To check the authorization level of the user |
| | From Process | 2.1 Login |
| | To Process | - |
| | Data Structures | Auth |

5	Data Flow Name	Access level status
	Description	Authorization level of the user is returned from the database
	From Process	-
	To Process	2.1 Login
	Data Structures	Auth
6	Data Flow Name	Sign-up attempt
	Description	Check identity of the user
	From Process	-
	To Process	2.2 Sign-up
	Data Structures	SignUp
7	Data Flow Name	Sign-up status
	Description	Verification of identity
	From Process	2.2 Sign-up
	To Process	-
	Data Structures	SignUp
8	Data Flow Name	Update username and password
	Description	The username and password (saved hashed) are saved into the database
	From Process	2.2 Sign-up
	To Process	-
	Data Structures	SignUp
9	Data Flow Name	Subject/Club/Society details
	Description	The subejcts/club details of the user are asked for other features
	From Process	2.2 Sign-up
	To Process	2.3 Enter Details
	Data Structures	SignUp, Personal
10	Data Flow Name	Upload Documents
	Description	to upload your own personal material and documents

From Process
To Process
Data Structures

-
3.0 Custom Folder
InApp Storage

11 Data Flow Name

View Documents

Description
From Process
To Process
Data Structures

to view the uploaded documents
3.0 Customer Folder
-
InApp Storage

12 Data Flow Name

Set Reminder

Description
From Process
To Process
Data Structures

Set reminder for important events/tasks
-
4.0 Custom Reminder
InApp Storage

13 Data Flow Name

Notification for custom reminder

Description
From Process
To Process
Data Structures

notification for your custome reminder is sent
4.0 Custom Reminder
-
InApp Storage

14 Data Flow Name

Enter/Edit class timings

Description
From Process
To Process
Data Structures

Enter or edit class timings for each subject to create a timetable
-
5.1 Generate Time-table
-

15 Data Flow Name

Store in app

Description
From process
To Process
Data Structures

Time table is stored in app for future access without internet connection
5.1 Generate Time-table
-
InApp Storage

16 Data Flow Name

Request to view time table

Description

User wants to view their time table

From Process	-
To Process	5.2 View Time table
Data Structures	-

17 Data Flow Name **Display Timetable**

Description	User's time table is displayed
From Process	5.2 View time table
To Process	-
Data Structures	-

18 Data Flow Name **Get timetable**

Description	Get user's time table from the in-app storage
From Process	5.2 View time table
To Process	-
Data Structures	InApp Storage

19 Data Flow Name **Club Announcement**

Description	Club secretary/joint secretary posts an announcement for an event/meeting
From Process	-
To Process	6.1 Receive club announcement
Data Structures	-

20 Data Flow Name **Club name code**

Description	Send the club code to get the list of users belonging to that club
From Process	6.1 Receive club announcement
To Process	6.2 Check list of users of a club
Data Structures	Club

21 Data Flow Name **List of students**

Description	the list of students belonging to a particular club/society
From Process	6.2 Check list of users of a club
To Process	6.1 Receive club announcement
Data Structures	Club

22 Data Flow Name **Request List**

Description	Get list of users of a club from database
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From Process	6.2 Check list of users of a club
To Process	-
Data Structures	Club

23 Data Flow Name **List of users to send notifications**

Description	Notification of the club announcement is sent to the respective users
From Process	6.1 Receive club announcement
To Process	6.6 Send notification to concerned users
Data Structures	Club

24 Data Flow Name **Assignment/quiz schedule**

Description	Assignment deadline and quiz/exam schedule announcement posted by the CRs
From Process	-
To Process	6.3 Receive date for deadline
Data Structures	-

25 Data Flow Name **Tasks due in one day**

Description	List of all the tasks that are due in one day
From Process	6.4 Due within 24 hours
To Process	-
Data Structures	InApp Storage

26 Data Flow Name **Branch and year**

Description	send the branch and year of the CR to the database for the list of students belonging to the same group
From Process	6.4 Due within 24 hours
To Process	6.5 List of students belonging to that branch and year
Data Structures	Personal

27 Data Flow Name **List of students of that group**

Description	The list of students from that branch and year are returned
From Process	6.5 List of students belonging to that branch and year
To Process	6.4 Due within 24 hours
Data Structures	-

28 Data Flow Name **Request list of students**

Description	Get list of students from the database belonging to that group
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From Process
To Process
Data Structures

6.5 List of students belonging to that branch and year
-
Personal

29 Data Flow Name

Students of that group for notification

Description
From Process
To Process
Data Structures

The list of students belonging to that group to send notifications
6.4 Due within 24 hours
6.6 Send notification to concerned users
Personal

30 Data Flow Name

Request to view profile

Description
From Process
To Process
Data Structures

Request to view profile of a said user
-
7.0 Pec Social
Personal

31 Data Flow Name

Show Profile

Description
From Process
To Process
Data Structures

view the profile of the user asked for
7.0 Pec Social
-
-

32 Data Flow Name

Upload study material

Description
From Process
To Process
Data Structures

CRs upload relevant study material for their respective subjects
-
8.0 Study Material
-

33 Data Flow Name

Request to view study material

Description
From Process
To Process
Data Structures

Request to view study material of a certain subject
-
8.0 Study Material
-

34	Data Flow Name	View study material
	Description	Show the study material for that respective subject
	From Process	-
	To Process	8.0 Study Material
	Data Structures	-
35	Data Flow Name	Class attended/not attended
	Description	Mark the classes you attended as well as not attended for a subject
	From Process	-
	To Process	9.1 Mark attendance
	Data Structures	InApp Storage
36	Data Flow Name	Send subject code to increment attendance
	Description	send the subject code to in-app storage to increment the attendance of that subject
	From Process	9.1 Mark attendance, Subjects
	To Process	-
	Data Structures	-
37	Data Flow Name	Request attendance data
	Description	Request the attendance data from the in-app storage
	From Process	9.3 Compute attendance %
	To Process	-
	Data Structures	InApp Storage
38	Data Flow Name	Computed attendance
	Description	The computed attendance is given along with the number of classes the user can miss to maintain that percentage
	From Process	9.3 Compute attendance %
	To Process	9.2 View attendance
	Data Structures	-
39	Data Flow Name	Request to view attendance
	Description	User sends request to view their attendance record
	From Process	-
	To Process	9.2 View attendance
	Data Structures	-

40	Data Flow Name	Show attendance
	Description	The app shows the attendance details of that user for that subject
	From Process	9.2 View attendance
	To Process	-
	Data Structures	-
41	Data Flow Name	Request list of subjects while signing up
	Description	The list of the subjects is taken by the user while signing up
	From Process	-
	To Process	9.4 Fetch list of subjects
	Data Structures	Subjects, Back_elect_sub, sub_converter
42	Data Flow Name	Get list of subjects of user
	Description	Get the list of subjects of that user from the database
	From Process	9.4 Fetch list of subjects
	To Process	-
	Data Structures	Subjects, Back_elect, Sub_converter
43	Data Flow Name	List of all subjects
	Description	The list of subjects of that user for that semester is given
	From Process	9.4 Fetch list of subjects
	To Process	-
	Data Structures	-
44	Data Flow Name	Request to view profile
	Description	User requests to view their profile
	From Process	-
	To Process	10.0 View profile
	Data Structures	Personal
45	Data Flow Name	View profile
	Description	The app shows the user their profile
	From Process	10.0 View profile
	To Process	-
	Data Structures	-

46 Data Flow Name**Get user details**

Description	Get user details from the database
From Process	-
To Process	10.0 View profile
Data Structures	Personal

47 Data Flow Name**Request user details**

Description	Request to get user details is made by the app
From Process	10.0 View profile
To Process	-
Data Structures	Personal

DATA DICTIONARY

DATA ELEMENTS

Element Name **1. SID**

Description Unique Identification number for each student who uses the application

Type Integer

Length 8

Element Name **2. Name**

Description Name of the student of PEC using the application

Type String

Length 100

Element Name **3. Email**

Description Official College Email Address of the student of PEC using the application

Type String

Length 100

Element Name **4. Password**

Description Password of student using application, encrypted before storing for privacy and security

Type String

Length 50

Element Name	5. Auth
Description	Authorization of the Student, either 1 or 2, determining if a student is a class representative or a Secretary/Joint Secretary of a Club/Technical Society. Auth = 0 is not saved in the data store.
Type	Integer
Length	1

Element Name	6. Branch
Description	Name of the branch the student is enrolled in.
Type	String
Length	25

Element Name	7. Year
Description	Current academic year of the student in PEC
Type	Integer
Length	1

Element Name	8. Semester
Description	Current Semester number of the student in PEC
Type	Integer
Length	1

Element Name	9. Sub_codes
Description	A string of all the core subjects codes concatenated together based on branch and the semester number of the student.

Type	String
Length	100

Element Name **10. Elect_codes**

Description A string of all the elective codes concatenated together which are available to a student based on their semester number and branch

Type	String
Length	100

Element Name **11. Subject**

Description Name of a subject based on the corresponding subject code

Type	String
Length	50

Element Name **12. Club_codes (alias = Society_codes)**

Description A string of double digit club codes concatenated together based on the respective clubs and technical societies a student is a part of.

Type	String
Length	50

Element Name **13. Club (alias = Society)**

Description Name of the club or technical society based on the corresponding club codes

Type	String
Length	50

Element Name **14. Sub_code**

Description	The subject code mapped to it's respective subject. contains 3 letters followed by three numbers, which together form a unique subject code.
Type	String
Length	100

DATA DICTIONARY

DATA STORES

Data Store Name	1. Super Table
Description	Contains details of Name, SID and official PEC email address of every student in PEC.
Inbound Data Flows	1. Storage of Student Database 2.2 Student Detail Check
Outbound Data Flows	2. User Detail status
Data Description	SID(Primary key), Name, Email
Data Store Name	2. SignUp Table
Description	Contains the SID and the hashed passwords of all the Users who have an account registered with the application.
Inbound Data Flows	2.1 Account existence check 2.1 check details 2.2 Upload username and password
Outbound Data Flows	2.1 Account existence status 2.1 Status
Data Description	SID(primary key), Password
Data Store Name	3. Auth Table
Description	Hold the authorization level of students who are secretaries/joint secretaries of clubs/technical societies or are Class Representatives of their class.
Inbound Data Flows	2.1 Access Level Check
Outbound Data Flows	2.1 Acces Level Status
Data Description	SID(primary key), Auth

Data Store Name

4. Personal Table

Description

Contains basic data of the user which includes their name, semester year etc.

Inbound Data Flows

2.3 User details such as Subjects, Clubs etc
6.5 Request List
10. Request user details

Outbound Data Flows

6.5 Get List Other Processes
10. Get user details

Data Description

SID(primary key), Name, Branch, Year, Semester

Data Store Name

5. Subjects Table

Description

Contains a string of subject codes concatenated for each combination of semester and branch.

Inbound Data Flows

9.4 Request list of subjects of user

Outbound Data Flows

9.4 Get list of subjects of user

Data Description

{Branch, Sem}(primary key), Sub_codes, Elect_codes

Data Store Name

6. Sub_converter Table

Description

Contains subject names for every subject code respectively and used to fetch subject names from their respective subject codes.

Inbound Data Flows

9.1 Send Subject Code increment attendance.

Outbound Data Flows

9.2 Return subject name

Data Description

Sub_code(primary key), Subject

Data Store Name

7. Back_Elect_sub Table

Description

Contains the SID of students who either have a backlog or have opted for an elective which is not a part of their core subjects, along with the name of their respective subject.

Inbound Data Flows

9.4 Request list of subjects of user

Outbound Data Flows

9.4 Get list of subjects of user

Data Description

SID(primary key), Sub_codes

Data Store Name	8. Clubs Table
Description	contains data about the clubs and technical societies each student is a part of. Every SID has a string with club codes concatenated together representing their respective clubs.
Inbound Data Flows	6.2 Request List of students from clubs
Outbound Data Flows	6.2 Get List
Data Description	SID(primary key), Club_codes
Data Store Name	9. Club_converter Table
Description	Used to convert club codes to their respective names.
Inbound Data Flows	6.2 Request List of students from clubs
Outbound Data Flows	6.2 Get List
Data Description	Club_code(primary key), Club
Data Store Name	10. In App Storage
Description	Data tables storing various forms of data from the API of a respective user, and these tables are stored on the user's device for local access to this data.
Inbound Data Flows	3 Request custom folder details 4. Request custom reminders details 5.1 Store time table details 5.2 Request time table 6.3 Store data, task, branch and year. 6.4 Check if anything is due within 24 hours 9.3 Request attendance data 9.1 Send subject code to increment attendance
Outbound Data Flows	3. Provide custom folder 4. Provide custom reminder details 5.2 User's timetable 6.4 Task due in one day. 9.3 Provide required data about attendance.
Data Description	various data elements depending on the form of data stored

DATA DICTIONARY

DATA STRUCTURE

Data Structure Name	Values
1. Super =	SID + Name + Email
2. SignUp =	SID + Password
3. Auth =	SID + Auth
4. Personal =	SID + Name + Branch + Year + Semester
5. Subjects =	Brach + Semester + Sub_codes + (Elect_codes)
6. Sub_converter =	Sub_code + Subject
7. Back_Elect_sub	SID + Sub_codes
8. Clubs =	SID + (Club_codes)
9. Club_converter =	Club_code + Club